

1 22. The method according to [claim 1,] claim 19, wherein each sensor of said
2 second sensor array is a member selected from the group consisting of an optical sensor, a
3 mechanical sensor, a radiation sensor, a thermal sensor and combinations thereof.

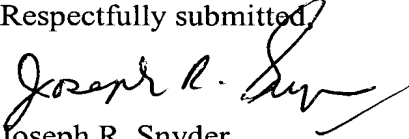
REMARKS

Claims 1-22 are pending in this application and presented for examination.
Claims 20-22 were amended to correct their dependency. No new matter has been introduced.
The claims are set forth in the Appendix for the Examiner's convenience. Petitioners
respectfully request early action on the merits.

CONCLUSION

In view of the foregoing, Applicants respectfully request early action on the
merits. If the Examiner believes a telephone conference would expedite prosecution of this
application, please telephone the undersigned at 925-472-5002.

Respectfully submitted,


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Appendix

1 1. A distributed sensing system in a networked environment for identifying
2 an analyte, said system comprising:

3 a first sensor array connected to said network comprising sensors capable of
4 producing a first response in the presence of a chemical stimulus;

5 a second sensor array connected to said network comprising sensors capable of
6 producing a second response in the presence of a physical stimulus; and

7 a computer connected to said network having an algorithm wherein said first
8 response and said second response are processed to identify said analyte.

1 2. The system according to claim 1, wherein said algorithm selects the most
2 relevant sensor modality in said first and said second array to identify said analyte.

1 3. The system according to claim 1, wherein each sensor of said first sensor
2 array is a member selected from the group consisting of a bulk conducting polymer film, a
3 semiconducting polymer sensor, a surface acoustic wave device, a fiber optic micromirror, a
4 quartz crystal microbalance, a conducting/nonconducting regions sensor, a dye impregnated
5 polymeric coatings on optical fiber and combinations thereof.

1 4. The system according to claim 1, wherein each sensor of said second
2 sensor array is a member selected from the group consisting of an optical sensor, a mechanical
3 sensor, a radiation sensor, a thermal sensor and combinations thereof.

1 5. The system according to claim 3, wherein each sensor of said first sensor
2 array is a conducting/nonconducting regions sensor.

1 6. The system according to claim 4, wherein each sensor of said second
2 sensor array is an optical sensor, a mechanical sensor, a radiation sensor, a thermal sensor and
3 combinations thereof.

1 7. The system according to claim 1, wherein the transmission of said first
2 response is conducted via wired communications.

1 8. The system according to claim 1, wherein the transmission of said first
2 response is conducted via wireless communications.

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1 9. The system according to claim 8, wherein said wireless communications
2 are implemented using communications technologies selected from a member of a group
3 consisting of infrared technology, satellite technology, microwave technology and radio wave
4 technology.

1 10. The system according to claim 1, wherein said networked environment is a
2 member selected from the group consisting of a worldwide computer network, an internet, the
3 Internet, a wide area network, a local area network, an intranet and combinations thereof.

1 11. The system according to claim 1, wherein said networked environment is
2 the Internet.

1 12. A device for monitoring an analyte in an environment, said device
2 comprising:
3 at least one sensor array, wherein said at least one sensor array comprises at least
4 two sensors capable of producing a first response in the presence of a chemical stimulus;
5 a second sensor which is capable of producing a second response in the presence
6 of a physical stimulus;
7 a connector that connects said at least one sensor array and said second sensor to a
8 central processing unit, said central processing unit collects and stores said first and second
9 responses; and
10 an analyzer configured to analyze a plurality of responses wherein said analyzer
11 monitors said analyte in said environment.

1 13. The device according to claim 12, wherein said second sensor is an array
2 of sensors.

1 14. The device according to claim 12, wherein said device is a handheld
2 device.

1 15. The device according to claim 12, wherein each of said at least two sensors
2 is a member selected from the group consisting of a bulk conducting polymer film, a
3 semiconducting polymer sensor, a surface acoustic wave device, a fiber optic micromirror, a
4 quartz crystal microbalance, a conducting/nonconducting regions sensor, a dye impregnated
5 polymeric coatings on optical fiber and combinations thereof.

1 16. The device according to claim 15, wherein each of said at least two sensors
2 is a conducting/nonconducting regions sensor.

1 17. The device according to claim 13, wherein each sensor in said second
2 sensor array is a member selected from the group consisting of an optical sensor, a mechanical
3 sensor, a radiation sensor, a thermal sensor and combinations thereof.

1 18. The device according to claim 14, wherein said handheld device further
2 comprises a communication interface coupled to the processing device and configured to
3 communicate with a computer network.

1 19. A method for transferring a combination of chemical and physical data
2 over a computer network for identification of an analyte, said method comprising:
3 transmitting sensory data from a first sensor array comprising sensors capable of
4 producing a first response in the presence of a chemical stimulus to a remote location;
5 transmitting physical data from a second sensor array comprising sensors capable
6 of producing a second response in the presence of a physical stimulus to a remote location; and
7 processing said sensory and physical data at said remote location for identification
8 of an analyte.

1 20. (Amended) The method according to claim 19, further comprising
2 employing a sensor selection algorithm to determine sensors in said first array.

1 21. (Amended) The method according to claim 19, wherein each sensor of said
2 first sensor array is a member selected from the group consisting of a bulk conducting polymer
3 film, a semiconducting polymer sensor, a surface acoustic wave device, a fiber optic
4 micromirror, a quartz crystal microbalance, a conducting/nonconducting regions sensor, a dye
5 impregnated polymeric coatings on optical fiber and combinations thereof.

1 22. (Amended) The method according to claim 19, wherein each sensor of said
2 second sensor array is a member selected from the group consisting of an optical sensor, a
3 mechanical sensor, a radiation sensor, a thermal sensor and combinations thereof.